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[redacted] 25X1

FY-67 Quarterly Report No. 2

PAR 243A
30 Nov 66

SUBJECT: Briefing Print Enlarger (Prototype)

TASK/PROBLEM

1. Design, fabricate, and test a prototype briefing print enlarger (BPE) based upon tests and observations of the breadboard equipment developed on the combined PAR 202/224.

DISCUSSION

2. During this quarter, effort on the project was at its highest level. The last of the subassembly designs was completed and all detail drawings for parts fabrication were finished. The electrical system drawings were completed. All parts have been fabricated with the exception of a few, and drawings for these were released recently.

3. Activity by the engineering group will continue at a lower rate in the completion of assembly drawings and in providing engineering follow-up service for the project.

4. The manufacturing department has started several minor subassemblies and will proceed with assembly work at a lower man-hour rate than has been possible in parts fabrication.

5. For the last design work on the project, a series of tests was made. The purpose was to explore the value of heater elements at the upper edge of the negative gate enclosure in shortening the time required for evaporation of the immersion fluid from the film as it is withdrawn upward from the gate. During these tests it was found that after injection of the fluid and closing of the gate:

a. There is a bead of excess fluid between the film and the gate glasses at the periphery of each gate glass.

b. If the gate is opened and the film is withdrawn before the bead of fluid evaporates, the excess fluid runs down the surface of the film forming a fluid bead along the bottom edge of the film.

DDR-DUPE

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c. An extended period of time——one to two minutes——is required for fluid removal if the excess fluid is not removed by means other than evaporation.

6. The gate assembly has been designed to remove the bead of fluid by momentarily touching the bottom edge of the web with two special animal-hair brushes as the web is withdrawn upward from the gate. Solenoid-actuated mechanisms move the brushes to touch only the bottom edge of the film and only as it is moving upward. At other times, the brushes are held away from the film. At the end of this report period, a source for the special brushes was being actively sought.

7. A subcontract was arranged and awarded for the design and fabrication of the prototype Easel Photometer based on the subcontractor's proprietary commercial product. The prototype Easel Photometer is scheduled to be delivered by 7 March 1967.

8. On 14 and 15 September, the customer's representative held a conference at the contractor's facility to acquaint three technical liaison men from other organizations with progress of the development effort. The discussion covered:

a. Achievements in the completed breadboard, PAR 202/224

b. Design goals

c. Configurations

d. Status.

During this conference, the following comments were made by the customer's representatives for consideration by the designers:

a. The interchangeable objective lens and the condenser assemblies should be identified with a particular enlarger——perhaps by serial number.

b. Service covers should be readily removable.

c. Transport caster dollies should be mounted on the frame by machine screws.

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d. De-activation of the lockout of the hand-knob used for fine film-position control should not be possible for the operator.

e. Interchangeable lens assemblies should have "full-hand" handles. All the features suggested were already incorporated or have since been incorporated in the design.

9. On 9 November, the customer's representatives visited the contractor to review progress (1) on this project and on others under the contract, and (2) on the seven-unit procurement of BPE's on Contract [redacted] 25X1 Task 4.

10. It was expected that the following data would be delivered to the customer's representatives on 29 Nov 1966:

a. A preliminary Spare Parts List for recommended FAK and Base Spares, based on engineering judgment.

b. A revised edition of the tentative specification for the BPE, Specification 469-333, and

c. Installation data for the BPE.

This material was not complete on 29 Nov 1966 and is now scheduled for delivery by mail by 23 December 1966. Eight copies of each are to be provided. Copies of a questionnaire used by the customer for installation engineering data were provided to the contractor to serve as an outline for the presentation of that information.

PLANNED ACTIVITY

11. In the next quarter it is expected that:

a. The prototype BPE will be assembled and will be nearly ready for testing.

b. The data described in paragraph 10 will be delivered.

c. The assembly drawings will be completed. This will complete the drafting effort required on this project except for changes which may result from problems encountered in fabrication, assembly, and testing work.

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